

Abergel, Rebecca J., Lawrence Berkeley National Laboratory, Berkeley, CA, “Harnessing f-Orbital Bonding through Precision Antenna Ligand Design for Actinide Complexation,” selected by the Office of Basic Energy Sciences.

Braley, Jenifer C., Colorado School of Mines, Golden, CO, “Actinide N-Donor Thermodynamics: Expanding the f-Element Covalency Dialogue,” selected by the Office of Basic Energy Sciences.

Cerfon, Antoine J., New York University, New York, NY, “High Performance Equilibrium Solvers for Integrated Magnetic Fusion Simulations,” selected by the Office of Fusion Energy Sciences.

Constantinescu, Emil M., Argonne National Laboratory, Lemont, IL, “Quantifying Global Structural Errors in Predictive Scientific Simulations,” selected by the Office of Advanced Scientific Computing Research.

Dahl, Carl Eric, Northwestern University, Evanston, IL, “A Scintillating Xenon Bubble Chamber for Dark Matter Detection,” selected by the Office of High Energy Physics.

Dean, Mark P.M., Brookhaven National Laboratory, Upton, NY, “Probing the Magnetic Excitations in Complex Oxide Interfaces and Heterostructures,” selected by the Office of Basic Energy Sciences.

Delaire, Olivier A., Oak Ridge National Laboratory, Oak Ridge, TN, “Quasiparticle Couplings in Transport of Heat, Charge, and Spin for Novel Energy Materials,” selected by the Office of Basic Energy Sciences.

Fernandes, Rafael M., University of Minnesota, Minneapolis, MN, “Competing Orders in Correlated Materials: Impact of Disorder and Non-Equilibrium Perturbations,” selected by the Office of Basic Energy Sciences.

Filippetto, Daniele, Lawrence Berkeley National Laboratory, Berkeley, CA, “High Repetition Rate Ultra-Fast Electron Diffraction Development,” selected by the Office of Basic Energy Sciences.

Gamblin, Todd, Lawrence Livermore National Laboratory, Livermore, CA, “Statistical Methods for Exascale Performance Modeling,” selected by the Office of Advanced Scientific Computing Research.

Ghimire, Shambhu, SLAC National Accelerator Laboratory, Menlo Park, CA, “Strongly-Driven Attosecond Electron-Dynamics in Periodic Media,” selected by the Office of Basic Energy Sciences.

Grabow, Lars C., University of Houston, Houston, TX, “Unifying Principles for Catalytic Hydrotreating Processes,” selected by the Office of Basic Energy Sciences.

Graham, Peter W., Stanford University, Stanford, CA, “New Searches for Ultralight Particles,” selected by the Office of High Energy Physics.

Grassellino, Anna, Fermi National Accelerator Laboratory, Batavia, IL, “Impurity Doping of Niobium for Ultra-Efficient Superconducting RF Cavities,” selected by the Office of High Energy Physics.

Grierson, Brian A., Princeton Plasma Physics Laboratory, Princeton, NJ, “Exploration of Main-Ion Properties at the Boundary of Fusion Reactors,” selected by the Office of Fusion Energy Sciences.

Hansen, Stephanie B., Sandia National Laboratories, New Mexico, Albuquerque, NM, “Non-Equilibrium Atomic Physics in High Energy Density Material,” selected by the Office of Fusion Energy Sciences.

Hirschauer, James, Fermi National Accelerator Laboratory, Batavia, IL, “Search for New Phenomena at the 13 TeV LHC: Fast Start and Strong Finish,” selected by the Office of High Energy Physics.

Holmes-Cerfon, Miranda C., New York University, New York, NY, “Kinetics of Particles with Short-Range Interactions,” selected by the Office of Advanced Scientific Computing Research.

Kabengi, Nadine, Georgia State University, Atlanta, GA, “In-situ Thermodynamics Measurements at Metal Oxides-Solution Interfaces Using Flow Adsorption Microcalorimetry,” selected by the Office of Basic Energy Sciences.

Kaufman, Lisa J., Indiana University, Bloomington, IN, “Characterization of Backgrounds for EXO,” selected by the Office of Nuclear Physics.

Li, Wei, William Marsh Rice University, Houston, TX, “Exploring Novel QCD Matter in Proton-Proton and Proton-Nucleus Collisions at the LHC,” selected by the Office of Nuclear Physics.

Majewski, Stephanie A., University of Oregon, Eugene, OR, “Search for New Physics with Top Quarks and Upgrade to the ATLAS Liquid Argon Calorimeter,” selected by the Office of High Energy Physics.

Ni, Ni, University of California, Los Angeles, Los Angeles, CA, “Exploring Superconductivity at the Edge of Magnetic or Structural Instabilities,” selected by the Office of Basic Energy Sciences.

Northen, Trent R., Lawrence Berkeley National Laboratory, Berkeley, CA, “Understanding Microbial Carbon Cycling in Soils Using Novel Metabolomics Approaches,” selected by the Office of Biological & Environmental Research.

Ong, Shyue Ping, University of California, San Diego, La Jolla, CA, “Elucidating the Determinants of Alkali Ionic Conductivity in Oxide and Sulfide Frameworks,” selected by the Office of Basic Energy Sciences.

Pett-Ridge, Jennifer, Lawrence Livermore National Laboratory, Livermore, CA, “Microbial Carbon Transformations in Wet Tropical Soils: The Importance of Redox Fluctuations,” selected by the Office of Biological & Environmental Research.

Pritchard, Mike S., University of California, Irvine, Irvine, CA, “Understanding the Roles of Cloud Microphysics and Land Surface Coupling Feedbacks in Multi-Scale Predictions of Central US Summer Hydroclimate,” selected by the Office of Biological & Environmental Research.

Qian, Xin, Brookhaven National Laboratory, Upton, NY, “Detector Development towards Precision Measurements of Neutrino Mixing,” selected by the Office of High Energy Physics.

Rowland, Joel C., Los Alamos National Laboratory, Los Alamos, NM, “Incorporating the Hydrological Controls on Carbon Cycling in Floodplain Ecosystems into Earth System Models (ESMs),” selected by the Office of Biological & Environmental Research.

Rusu, Florin, University of California, Merced, Merced, CA, “Scalable and Energy-Efficient Methods for Interactive Exploration of Scientific Data,” selected by the Office of Advanced Scientific Computing Research.

Schenke, Bjoern P., Brookhaven National Laboratory, Upton, NY, “Development of a Comprehensive Description of High-Energy Nuclear Collisions at RHIC and LHC and Electron-Ion Collisions at a Future Electron-Ion-Collider,” selected by the Office of Nuclear Physics.

Scovazzi, Guglielmo, Duke University, Durham, NC, “Advanced Methods for Immersed Domain Multi-Physics Computations,” selected by the Office of Advanced Scientific Computing Research.

Stern, Nathaniel P., Northwestern University, Evanston, IL, “Probing Coherent States of Light and Matter in Two-Dimensional Semiconductors,” selected by the Office of Basic Energy Sciences.

Weber-Bargioni, Alexander, Lawrence Berkeley National Laboratory, Berkeley, CA, “Visualizing and Controlling Energy Excitation and Transport in Mesoscale Organic and Inorganic Material Composites,” selected by the Office of Basic Energy Sciences.

Yang, Jenny Y., University of California, Irvine, Irvine, CA, “Design of Efficient Molecular Electrocatalysts for Water and Carbon Dioxide Reduction Using Predictive Models of Thermodynamic Properties,” selected by the Office of Basic Energy Sciences.